CLIMATE ANALOGS ACADEMY

A **USDA NIFA** Extension Climate Hub Partnership
Led by Washington State University · CSANR

STL Urban Ag Workshop*

Meet us in St. Louis — building a climate-resilient urban food system

Final Report

30-Sep-2026























** The Climate Analogs Academy is a USDA NIFA Extension Climate Hub Partnerships Project (20236701339348) led by Washington State University's Center for Sustaining Agriculture and Natural Resources (CSANR).*

Agriculture & Food Systems Institute

CSANR
Center for Sustaining Agriculture and Natural Resources
Washington State University

Saint Louis University

Taylor Geospatial

WashU

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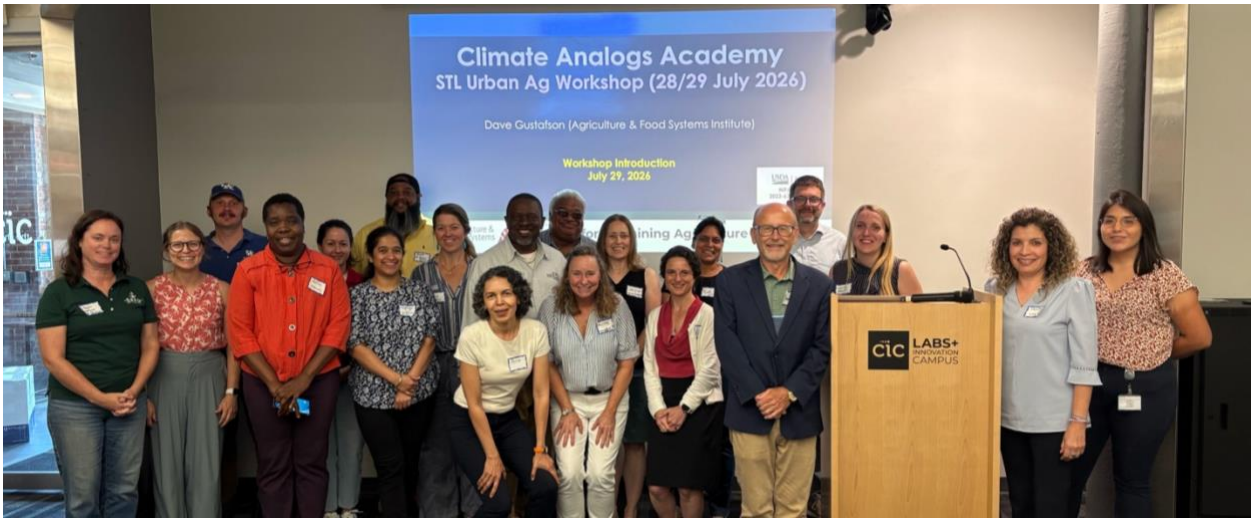
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About this report

This report was assembled and primarily written by the workshop organizer, Dave Gustafson, an independent scientist who performed all workshop-related activities under a contract with the Agriculture & Food Systems Institute. Significant assistance on workshop planning and execution was provided by Rachel Opitz (Taylor Geospatial). A draft of this report was circulated among workshop planning committee members for comment, but all final editorial decisions were made by Dave, who takes full responsibility for its final content, including any errors or omissions.

Executive Summary

On July 29, 2026, the Agriculture & Food Systems Institute (in partnership with Washington State University's Center for Sustaining Agriculture and Natural Resources and several other partners) held a day-long workshop in St. Louis, Missouri, with a primary overall purpose of developing science-based guidelines for the successful expansion of Urban Ag in St. Louis. The workshop brought together local and national Urban Ag experts, as well as Specialty Crop Extension specialists from across the country – particularly those in regions now experiencing St. Louis's future climate (in accordance with the 'climate analogs' concept). The workshop also included Urban Ag experts from Dallas and New York City, both of which have seen successful expansion of Urban Ag in recent years. The workshop was preceded on July 28 by an optional half-day tour of Urban Ag locations throughout the St. Louis region, including two stops in Illinois: Eckert's Farm in Belleville and the new Jackie Joyner-Kersee Food, Agriculture & Nutrition (FAN) Center in East St. Louis. A pre-workshop reception was held that evening at the historic Post Building in downtown St. Louis. The reception was highlighted by a moderated panel discussion featuring Maxine Clark (Delmar DivINe, etc.) and Elliott Kellner (President, Taylor Geospatial). The workshop itself included a morning filled with presentations by several of the gathered experts, followed by a pair of afternoon breakout sessions during which the participants brainstormed opportunities and barriers to the expansion of Urban Ag in St. Louis in two general domains: (1) science-related topics, such as agronomics, climate, and innovative uses of GeoAI; (2) policy-related topics. This workshop report includes links to the morning presentations, as well as summaries of the breakout discussions. Key workshop recommendations were identified in the following areas: research needs, increased funding in Extension and other support areas, strengthened communications, needs for new investments, policy reforms, and the creation of new organizations and branding to support successful expansion of STL Urban Ag. In summary, the workshop participants concluded there are major opportunities for expansion of STL Urban Ag in St. Louis that would bring a host of socioeconomic benefits. Given the current dire status of certain neighborhoods, particularly those ravaged by the May 2025 tornado, action is urgently needed to begin pursuing these opportunities. Fortunately, the St. Louis region possesses the needed expertise and resources to act upon these opportunities. All that is missing is the collective will to begin.



Meeting Recap

The workshop focused on using climate analogs and mapping to guide the expansion of Urban Ag in St. Louis (STL), especially in response to climate change and neighborhood disinvestment. As shown in Attachment 1, the 48 workshop participants had diverse areas of expertise (AgTech, Education, Extension, Farmers, Food, GeoAI, Municipal, Philanthropy, Research, Seed). Dave set the context with the city's history, tornado damage, and disparities in recovery, and explained the workshop's primary goal: develop science-based guidelines for successful expansion of STL Urban Ag. Kirti presented the climate analogs concept, showing how STL's future climate resembles cities in Texas, Oklahoma, and Arkansas, and discussed how analogs could inform crop choices, pest management, and cross-regional learning. Rachel demonstrated interactive GIS maps using public data to assess urban lot and rooftop suitability for Urban Ag, highlighting factors like food deserts, soil risk, land surface temperature, and building shadows, while participants suggested adding layers for demographics, flooding, social infrastructure, and investor activity. STL participants described a passionate but fragmented Urban Ag scene, with challenges around funding, soil contamination, business capacity, and aggregation of small-scale production, but also strengths in community engagement and existing networks. Representatives from elsewhere across the country (Delaware, Georgia, Kentucky, New York, Oklahoma, Texas) shared their insights, focusing on such things as food access, workforce development, education partnerships, having multiple revenue streams, ethnic crops, and collaborative training programs like New Ground Growers (a Delaware-based initiative). After the morning presentations, parallel breakout sessions were held, with the key points tabulated by Dave (Attachment 2) and Rachel (Attachment 3). All workshop participants concluded the day by making individual comments in a full-group setting.

Key Recommendations

1. Conduct and publish an assessment of how climate is likely to impact STL Urban Ag through 2050 and beyond, including the northward movement of pests and diseases.
2. Facilitate the creation of a gap analysis and ecosystem map for STL Urban Ag, identifying where resources and research are needed.
3. Assess information currently available from groups like City Greens or Local Harvest to determine whether new surveys are needed to learn what crops residents would like to see grown in STL.
4. Advocate for the funding of multiple long-term Urban Ag positions in UM/UIUC Extension.
5. Explore the St. Louis data dashboard from WashU and assess how to pull demographic and public health data that would assist in STL Urban Ag planning.
6. Launch a centralized website for STL Urban Ag: e.g., mapping tool presented by Taylor Geospatial, crops desirability, zoning, resources for farmers, etc. (NYC example)
7. Advocate for the development or reinstatement of a clear process/program for accessing vacant land managed by the Land Reutilization Authority (LRA) for Urban Ag in STL.
8. Consider encouraging Eckert's or other investors to launch additional year-round Urban Ag 'destinations' in STL, following the practices Eckert's has pioneered so successfully in nearby Illinois. Collaborate with others already in place (e.g., EarthDance) or currently planning similar initiatives (e.g., Jackie Joyner-Kersee FAN Center).
9. Address the massive reforms needed in zoning and other policies to enable successful, rapid expansion of STL Urban Ag.
10. Create a new entity (identify optimal host) whose purpose is to facilitate greater cross-sector partnerships on STL Urban Ag, as well as needs in funding and other resources.
11. Determine whether a new member-based organization is needed to represent the collective interests of STL Urban Ag farmers.
12. Consider creation of a new 'Grown in The Lou' sticker/brand for foods produced from crops grown by STL Urban Ag farmers. Collaborate with the similar 'Known and Grown' initiative.
13. Much stronger and more effective communication is urgently needed to explain how the expansion of Urban Ag and its many benefits should be a critical regional priority.
14. Organize a tour for community leaders and policymakers of existing STL Urban Ag sites to showcase success stories and needs.
15. Utilize climate-related and other workshop findings, as well as an updated version of Rachel's mapping tool to engage a group of current STL urban ag farmers and other key stakeholders to co-develop a multi phased plan for the conversion of current LRA locations into an expanding network of neighborhood-centered urban farms.
16. Reconvene the STL-based participants with additional stakeholders working in this space – identify a suitable convener for such a meeting (potentially Danforth, TBC).

Individual Action Items[1]

Dave Gustafson

- Explore the St. Louis data dashboard from WashU and assess how to pull demographic and public health data for urban agriculture planning.
- Facilitate the creation of a gap analysis and ecosystem map for urban agriculture in St. Louis, identifying where resources and research are needed.
- Organize a tour for community leaders and policymakers of existing urban agriculture sites in St. Louis to showcase success stories and needs.
- Advocate for the development or reinstatement of a clear process/program for accessing vacant LRA land for urban agriculture in St. Louis.

Jamie Shanklin

- Continue to develop and share the New Ground Growers program curriculum and resources for urban agriculture education.

Megan Moncure

- Work with St. Louis County and the City to organize a workshop on zoning requirements and rezoning processes for urban agriculture.

Melba Salazar-Guitiérrez

- Share information about the Georgia weather network and decision support tools for urban agriculture with interested parties.

Yaritza Torres Espinosa

- Share the Dallas Comprehensive Urban Ag Plan and GIS web map (Urban Ag and Community Health Explorer) with the group.

Yolanda Gonzalez

- Share resources and information about the New York City Urban Ag Data Explorer Hub and related programs with the group. **[DONE]**

[1] *As identified by the AI-generated meeting summary.*

Presentation Summaries

The morning session featured a series of presentations. Slide decks shared by the various presenters are available on a Google Drive folder, with links to the individual PowerPoints provided below. Some of these summaries are longer than others, limited by the strength of the AI-generated descriptions.

Dave Gustafson (Agriculture & Food System Institute) – SLIDES

Dave provided context about the workshop's purpose, highlighting the goal to develop science-based guidelines for successful expansion in STL Urban Ag, particularly focusing on the use of climate analogs and GeoAI. He explained his personal passion for the work, including a farmer workshop that he had personally sponsored and held on 14-Nov-2025 at the offices of Delmar DivINe. Part of Dave's passion is a personal sense of outrage over the lack of any response to help the portions of North City St. Louis that were ravaged by the 16-May-2025 tornado – the very same neighborhoods that have been so horribly neglected for decades. It is his belief that Urban Ag could bring renewal to these areas, with many benefits. He went on to explain the origins of the current workshop, how he realized that it could be reasonably connected as a new activity to an existing multi-institutional USDA-NIFA funded project led by Washington State University's Center for Sustaining Agriculture and Natural Resources, the Climate Analogs Academy. The goal of that project is to s to build Extension and Climate Hub capacity and expertise to catalyze climate change adaptation in US specialty crops. The connection to Urban Ag is clear, as virtually all crops grown in an urban setting are specialty crops. Dave proposed the workshop concept in mid-March 2026 and it was approved by the end of the month. He began meetings with Taylor Geospatial on the topic in April, and a planning committee was launched shortly thereafter, with biweekly meetings held right up until early July to facilitate planning.

Kirti Rajagopalan (Washington State University) - SLIDES

Kirti presented a comprehensive analysis of climate analogs for specialty crop production across US counties. The research compared different approaches to finding analogs, including both basic climate variables and crop-specific metrics like growing degree days and heat stress indices. Through the aforementioned Climate Analog Academy project, Extension professionals from different regions participated in site visits and training to facilitate cross-regional dialogue about climate adaptation strategies, with Delaware serving as an analog for Midwest counties and Texas locations serving as analogs for St. Louis. The

team plans to expand the geographic scope of analog calculations to include international locations and develop a web tool that allows users to identify both target-to-analog and analog-to-target relationships.

Rachel Opitz (Taylor Geospatial) - SLIDES

Rachel a novel mapping tool that presents a series of maps analyzing lot suitability STL Urban Ag, combining publicly available data on vacant land, soil risk, food deserts, and climate factors. The team discussed potential additional data layers including tax incentives, distribution infrastructure, social structures like food banks and schools, and flooding models. Participants explored the maps and identified that the top 25 suitable sites were primarily located in northern St. Louis, near Fairground Park, with high scores driven by factors like being in food deserts, having good sunlight access, and being distant from polluted brownfield sites. The group discussed the utility of mapping tools for community planning and urban agriculture work in St. Louis. Carlton (Operation Food Search) shared insights about food desert mapping efforts, highlighting the importance of considering access and distribution challenges beyond just geographic proximity. The discussion identified opportunities to incorporate demographic data, including age, education level, and population statistics, to better understand community needs and vulnerability to issues like urban heat.

Delaware Team (Andy Wetherill, Rose Ogutu, Jamie Shanklin) – NO SLIDES AVAILABLE

The team from Delaware highlighted the strong community passion for growing food but noted significant challenges including limited funding, small staff, soil contamination issues, and the need for better aggregation of small-scale farmers. Jamie and Rose from Delaware presented their successful urban agriculture initiatives, including community partnerships, multiple revenue streams, and a New Ground Growers program that has trained over 30 participants since its inception three years ago. The discussion emphasized the importance of collaboration between organizations rather than competition, and highlighted successful examples of transforming contaminated brownfield sites into productive urban farms. Andy discussed challenges in urban agriculture, including short-term grant funding, land access issues, and the need for better beginner farmer support. He highlighted his work at Delaware State University focusing on ethnic and specialty crop diversification, particularly working with Caribbean and Hispanic communities.

Melba Salazar-Guitiérrez (Georgia, UGA Center for Urban Agriculture) - SLIDES

Melba presented the University of Georgia's urban agriculture programs, which include training for new farmers, pollinator protection, and landscape management certifications, though they face challenges with limited staffing and sustainable funding. (*limited transcript, please see slides for details*)

Brent Arnoldussen (Kentucky, University of Kentucky) – NO SLIDES

Brent from Kentucky emphasized high-density fruit production systems as a viable approach for urban agriculture, discussing commercial production methods that could be scaled down to smaller spaces while maintaining economic viability.

Yolanda Gonzalez (New York, Cornell U) – SLIDES

Yolanda Gonzalez from Cornell Cooperative Extension presented on the connection between climate resilience and urban agriculture in New York City. She highlighted various urban agriculture initiatives including community gardens, rooftop farms like Brooklyn Grange, and agroforestry practices, while discussing challenges such as land insecurity and succession planning for urban farms. The presentation covered specific strategies including air-pruned raised beds, biochar, and mushroom cultivation, along with climate adaptation measures like stormwater management through community gardens.

Micah Anderson (Oklahoma, Langston U) - SLIDES

Micah presented his background in farming, highlighting his family's agricultural history in Oklahoma and his current efforts to help people learn about growing food. He discussed various farming techniques, including the use of heirloom and hybrid seeds, and shared his work with students and community members in developing agricultural skills. (*limited transcript, please see slides for details*)

Yaritza Torres Espinosa (Texas, City of Dallas) - SLIDES

Yaritza Torres Espinosa from the City of Dallas presented their Comprehensive Urban Agriculture Plan (COOP), which was developed as part of the city's Climate Action Plan and aims to address barriers to urban agriculture through five key recommendations including regulatory reform, land access support, and market opportunities. She detailed their GIS

analysis of land access opportunities and challenges across Dallas, identifying Urban Ag Priority Areas based on need versus opportunity metrics, with particular focus on historically disenfranchised areas. The presentation highlighted their Urban Ag Infrastructure Support Pilot Program, which awarded $100K in grants to 22 sites across 14 districts, and noted that urban agriculture sites in Dallas have increased from 48 to 82 sites representing 10.4 to 22.3 acres since the plan's release. She presented an overview of land access initiatives in Dallas, including partnerships with Parks and Rec, Housing and Community Development, and Code Compliance, focusing on programs like beautification agreements and land transfer programs. The discussion covered a year-and-a-half development process for a cooperative that was unanimously approved by council, with considerations for transportation, storage, and cultural aspects of urban agriculture. The meeting then transitioned to structured breakout sessions, with one group led by Rachel focusing on agronomic and science-based guidelines for urban agriculture expansion in St. Louis, while the other group led by Dave addressed non-agronomic issues like policy and infrastructure.

AI-Generated Narrative of Rachel's Breakout Groups[2]

The group discussed challenges and opportunities in urban agriculture, particularly focusing on St. Louis. They identified the need for more guidance on urban agriculture practices, including plant varieties suitable for small spaces and container growing. The discussion highlighted issues such as water access, lead in soil, and the need for consistent labor. The group also touched on energy considerations for urban agriculture, including the potential for agrivoltaics and season extension through hoop houses. They noted the lack of scientific research on some aspects of urban farming, particularly regarding pollution and heavy metals in soil.

The group discussed zoning requirements for urban agriculture in St. Louis, noting that many residents want to expand beyond hobbyist gardening but face challenges with municipal water costs and rezoning requirements. He mentioned plans to organize a workshop with St. Louis County about zoning processes and shared insights about water usage considerations for farmers versus residential users. The conversation also touched on climate change impacts, including recent Canadian wildfire effects, and the need to develop better metrics for measuring success in urban agriculture programs.

The group discussed strategies for successfully expanding urban agriculture in St. Louis, focusing on policy, planning, and community engagement. Key topics included the need for

[2] The Breakout Groups hosted by Rachel were in the main conference room and Zoom was still running, so this AI-generated summary became available. It has not been edited.

zoning reforms, funding opportunities, education and outreach to communities, and the integration of urban agriculture with city priorities such as economic development and environmental remediation. The participants identified establishing a network of weather stations and gathering data as important next steps, as well as engaging community leaders and sharing success stories to build support. They also emphasized the importance of aligning urban agriculture initiatives with existing city policies and highlighted the need for better outreach and education to reach disengaged stakeholders.

The group discussed strategies to expand urban agriculture in St. Louis, focusing on publicizing success stories, creating case studies, and developing targeted marketing approaches. Key action items included developing a clear process for accessing land for community gardens and urban farms, conducting a gap analysis to identify opportunities in the food value chain, and engaging younger generations through youth programs at community centers and schools. The discussion highlighted challenges such as slow government processes, the need for bi-state cooperation between Missouri and Illinois, and the importance of building grassroots momentum and coalition representation with city officials.

Explanation of Attachments

Attachment 1: List of workshop registrants and/or participants.

Attachment 2: Dave's raw notes from the two afternoon breakout sessions that he hosted.

Attachment 3: Rachel's raw notes from the two afternoon breakout sessions that she hosted.

Attachment 4: Selected STL Urban Ag locations, including a coded map, and a hyperlink to a Google Drive folder containing photos taken by Dave while scoping out these locations as possible stops for the mini-tour. The ones selected for the mini-tour are at the top of the list, though we were unable to visit all of them during the mini-tour, due to time constraints.

Attachment 5: Information on the planned mini-tour stops

Attachment 6: Information on the moderated panel discussion held at the Tuesday evening reception. A video of the panel discussion is still being edited and will be made available when editing is complete.

Acknowledgements

Dave wishes to acknowledge Chad Kruger, Teal Potter, and the entire team at Washington State University for approving this workshop as a component of the No Cost Extension to the Climate Analogs Academy project. Accordingly, Dave explicitly acknowledges the funding provided through that USDA NIFA Extension Climate Hub Partnerships Project: 20236701339348. Dave thanks Andrew Roberts, Jessica Mojica, Stephanie Carter and the entire team at the Agriculture & Food Systems Institute for their administrative support. Dave expresses thanks to Rachel Optiz, Elliott Kellner, and everyone at Taylor Geospatial for their engagement and in-kind support of the workshop. Dave also thanks Kirti Rajagopalan, for her creative scientific work that led to this novel application of the 'climate analogs' concept … as well as for stepping in at the last minute to get an additional rental car for the mini-tour! Dave also thanks the presenters, the hosts on the mini-tour, and all the workshop participants for their enthusiasm and bountiful outpouring of excellent ideas. And lastly, a special word of thanks to Lauren Littrell for so professionally hosting the moderated panel discussion, and to Maxine Clark, who so generously shared her time, wisdom and insights at the panel discussion. What a marvel she is and an inspiration to all of us!

Attachment 1. Workshop Registrants

Org	Last	First	Sector
BioGenerator Ventures	Althaber	Christy	AgTech
BioSTL	Zimmerman	Chad	AgTech
The Yield Lab	Regagnon	Stephanie	AgTech
Wash U	Feinberg	Tova	AgTech
EarthDance Organic Farm School	Rockamann Korte	Molly	Education
SLU Teaching Garden	Claggett	Marilyn	Education
SLU Teaching Garden	Landfried	Lauren	Education
SLU Teaching Garden	Mattfeldt-Beman	Millie	Education
Cornell U	Gonzalez	Yolanda	Extension
DESU	Ogutu	Rose	Extension
DESU	Wetherill	Andy	Extension
E Texas A&M	Perez	Alma	Extension
FarmHand Ventures	Bowen	Connie	Extension*
JJK Foundation	Warner	Chad	Extension*
Langston U	Anderson	Micah	Extension
Langston U	Salomon	Rose	Extension
U Kentucky	Arnnoldussen	Brent	Extension
U Missouri Extension	Isele	Elihu	Extension
U Missouri Extension	Pessereau	Eliza	Extension
UGA-Griffin-Urban-Ag-Center	Salazar-Gutiérrez	Melba Ruth	Extension
Baden Farms	Houston	Russell	Farmer
City Blossoms	Edwards	Jamie	Farmer
Eckert's	Eckert	Chris	Farmer
Green House Venture	Workman	Craig	Farmer
Messiah's Market Herbs & Hort.	Shanklin	Jamie	Farmer
Peoples Harvest	McKee	Joseph	Farmer
Operation Food Search	Adams	Carlton	Food
Operation Food Search	Watson	Monica	Food
T-Kartor USA	Bailey	Simon	GeoAI
Taylor Geospatial	Kellner	Elliott	GeoAI
Taylor Geospatial	Opitz	Rachel	GeoAI
City of Dallas	Torres	Yaritza	Municipal
City of St. Louis	Abdur-Rahman	Tiger	Municipal
City of St. Louis	Finnegans	Shawn	Municipal
Clark-Fox Family Foundation	Clark	Maxine	Philanthropy
LOAM	Drummond	Lauren	Philanthropy
Agriculture & Food Systems Institute	Gustafson	Dave	Research
U Missouri at St. Louis & MOBOT	LaMontagne	Jalene	Research
Wash U	Doyle	Mark	Research
Wash U	Morales-Heil	Alex	Research
Washington State U	Rajagopalan	Kirti	Research
Washington State U	Savalkar	Supriya	Research
Webster U	Miller-Struttmann	Nicole	Research
Seed STL	Gunderson	Dean	Seed
Seed STL	Moncure	Megan	Seed

** While not part of a formal Extension group, plays an analogous role within the Urban Ag ecosystem*

Attachment 2. Notes from the Breakouts led by Dave

Session 1: Science Topics

- Create better inventory of what we already have
- Develop short-term, medium-term, long-term plan to→ Future
- Soil testing of available ground, toxicity, etc.
- Site-specific evaluation wrt water, floods, winds, etc. – shade etc., heat island effects
- Look for proxy data to plug into the analysis, (e.g., water quality)
- Mine historical data to determine site history
- Employ "open data' approach that ingest additional data layers
- Enable great access to extension support
- Make sure the map includes details about current Urbin Ay use of the space
- Varietal trial info: can it be shared?
- now being grown
- Broad listing of crops (incl. varieties) now being grown
- What crops are most desirable in terms of multiple factors (e.g., pest resistance, tolerance to heat & droughts, ability to promote a stronger sense of community, social integration)
- Seasonality considerations, try to use the ground at all times of year (Eckert's examples)
- Yield potential, maximize food production vs. maximizing other aspects
- How close are we to the full yield potential?
- Try to get "natural perennials", pollinators, 'state tree' flowers, etc.
- Teach composting, train the trainer, best practices, add to the map
- Cut flowers, make bouquets
- Soil health, biochar, etc., other soil amendments, cover crops, etc.
- Vertical Ag
- Competitions: e.g., biggest pumpkin, etc, other creative ideas to engage the broader public
- Chickens? Goats? Fish? Bees? etc., Rabbit pellets are great for seed emergence!
- Assessment of different production systems, e.g., indoor, hydroponics, etc.
- 4H? FFA? University Ctiy is already collaborating with one of these?
- List all the benefits of Urban Ag
- Directory of resources needed by Urban Ag farmers
- Regional corporate tax to support Ford System Transformation
- Assess how climate is likely to impact Urban Ag in STL
- What pests, rodents, etc. are now and will in the future impact Urban Ag in STL? Neighborhood-level surveys of what people would like to see grown in their areas
- Food Safety? Liability? etc., Regulations? Water?
- Assess impact (# kids visiting) and report it in a way to show societal benefit
- Is the system truly resilient in the face of climate variabilly? e.g., droughts, flooding, heat waves, etc.
- Need to be able to capture water from excessively high rainfall events
- Crop calendars are shifting

Session 2: Policy Topics

- Fund multiple long-term Urban Ag positions in UM extension
- Launch centralized website with FAQs on Urban Ag: meant to answer general questions that members of the public might have on zoning, etc.
- Massive zoning reforms are needed to enable successful expansion of Urban Ag
- Also need reform of on-farm liability rules for those who visit Urban Ag farms
- Enhance quality and depth of Extension-related info targeting Urban Ag farmers
- There is currently a lack of info available on what grants and other funding are available to help drive expansion of Urban Ag
- We should pursue multiple potential novel uses of AI to write & manage grants related to Urban Ag
- Fund a modern-day equivalent of "40 acres and a mule" for Urban Ag farmers
- Encourage greater cross-sector partnerships on Urban Ag
- Make sure that cities label Community Gardens as such, rather than as Vacant Lots
- Clear definitions of Community Gardens vs. Urban Farms and any other related terms (e.g., income thresholds, etc.)
- Create a proper 'coalition' or actual member organization of Urban Ag farmers → partner with SWCD?
- Create a Regional Food System Council
- Sponsor legislation to mandate that all new development MUST include 'set-asides' that will be occupied by preferred uses of some of the land (e.g., solar or Urban Ag or Green Roofs)
- Pursue opportunities in medians, rights-of-way, etc.
- Expand municipal edible landscaping
- Expand tax-free weekend concept to include incentives for purchases related to local Urban Ag
- Create a "Grown it The Lou" sticker/brand for foods that produced from crops grown by STL Urban Ag farmers
- Combine Urban Ag educational curricula with STEM-related education
- Fund an Urban Ag Master Farmer Program
- Fund a Summer Youth Education Program related to Urban Ag
- Farm to School program expansion
- GAP Certification training
- Enhance effectiveness of Farmers Markets programs
- CSA Voucher program?
- Activate local grocery stores to expand distribution
- Incentives for schools to buy food in-state
- Comm. College Sustainable Urban Ag Program

Attachment 3. Notes from the Breakouts led by Rachel

Session 1: Science Topics

- Needs industry engagement with agronomic elements of a program.
- Office of urban ag works with office of climate mitigation / environment – incentive for development
- Soil testing - necessary data - funded through state gov't in NYC… nutrient and heavy metal. It's 30 for nutrient 75 for heavy metal through mizzou extension.
- Who owns data and responsibility for testing? Need to know this as a starting point.
  - E.g. make soil test data available
- Make sure there are urban ag champions in university extension teaching teams
- Different flavours of urban ag and specific agronomic advice for them
- Hire more scientists into extension!
- Think about ecosystem services
- Think about interactions with other systems e.g. pollinators
- Guidance on new seed varieties…
  - Existing: varietals for smaller spaces, hydroponic seeds, fruits bred for soil-less production, … need more guidance for cultivars and management best practices
- Source seeds locally. Know what seed companies operate in the area.
- Water access - need the data on this. Infrastructure grants like in Dallas would be huge
  - STL has a lead pipe problem. What is the impact of this?
- Think about interactions with other urban development.
- Consistent labor - right now STL is very dependent on volunteer labor. May need to move to paid labor.
- NYC had to develop new guidance for soil management, e.g. accounting for soil BD, because operations are growing in compost. Organic matter is very high… this changes your management guidance.
- Need better answers around pollution, e.g. farms near roads, ozone toxicity, other soil and air contaminants, PFAS, microplastics.
- Need more information on bioremediation and its potential
- Need more guidance for container growing, small scale growing, non-commercial hydroponics, indoor growing.
- Energy + urban ag: opportunities e.g. agrivoltaics to offset energy for urban ag.
- Hoop houses: extend the growing season. Think about the energy implications of urban ag practices, especially indoor.
- Colocate with data centers - use the heat from this. It's a circularity opportunity. Can use heated water from it. Can use its CO2.
- STL has very inexpensive water
- Peri-urban ag - people bringing ag produce from the 'shed' around STL
- Urban forestry academy: have this kind of training to support fruit tree care in urban contexts and guidance on e.g. where to plant it, how long until it fruits
  - Data driven tree placement - where they will have the most benefit
- Guidance on: heat domes and how plants react to this and how to manage this;
- Get science on social media!

- How do we aggregate data and bring scientists in to support analyzing it and providing insights?

Session 2: Policy Topics

- Zoning requirements. How to get rezoned to be commercial?
- Ag rates for water? How much are farms charged? How does this work for urban farms?
  - Most urban ag uses municipal water. Can they access ag rate water?
- Need to get the city to recognize what hydroponics, aquaponics, etc are for zoning purposes
- City demographics are changing, and tax base is moving to the county. How do we look ahead into the future to understand where food deserts move to/from?
- Zoning
- Health risk perspective: both negatives and positives: allergies,
- Permitting: to grow, to sell,
  - Need better info on what the rules are and understanding what rules might need to change
- Population and demographics: need to know about culturally appropriate crops and foods
- $$$: who funds the expansion of urban ag?
  - Grants and grant management
  - What are the business models for urban ag so that you're not just grant-dependent
- Need to understand different revenue streams
- Community engagement:
  - Work through schools
- How do we get buy-in from people uninterested in urban agriculture?
  - Who do we need to persuade and how do we persuade them its in their interest?
- City and private sector
  - How does urban ag fit into current priority issues for STL as a city today?
- Cross map onto what they're already doing
- Procurement: policy mechanisms for public sector purchasing
- Bioremediation: need to show how it complies with policy-based requirements for improving air/water/soil quality
- Outreach, advocacy, education - all essential

If we had one action for next year:

- Create an economic model for new urban agriculture initiatives and enable people to use it
- Institute / expand a network of micromet stations in STL and make the data publicly available with QA/QC
- Inform people in food insecure communities that there are people who want to help. Create a list of community leaders and give them a tour of urban ag in STL to build awareness about what's happening now and ambition.
  - Establish a forum for prioritizing actions.
- Publicize success stories of current urban ag in STL - share what the benefits are more widely and loudly. Make it personal - families, individuals, neighborhoods, organizations.
  - Storytelling is essential. Talk about the social benefits of urban ag.
  - Use social media to show lives positively impacted and scale of impact.
- Quantify the economic / lives impact of existing urban ag to persuade policy makers. Concrete numbers of participants e.g. in OFS program for pregnant women and translate this into $ of impact.
  - Showcase tangible and intangible impacts

- LRA used to have a garden lease program that was removed and hasn't been replaced. We need a replacement for the LRA garden lease program. There has to be an actionable clear program to access the land and a process for people to apply to access land.
- Create an ecosystem map for Urban Ag in STL and use this to provide a gap analysis.
- Focus on youth and next generation of farmers. Inspire and teach them about growing in urban contexts. Empower them to set priorities. Give them hands on plots and clubs where they can participate in activities. Maybe partner with e.g. YMCAs and Libraries and other community hubs to do this.
- Set targets for public procurement e.g. in 5 years, 50% of all food in schools must be grown locally.

Biggest barriers to expansion of urban ag:

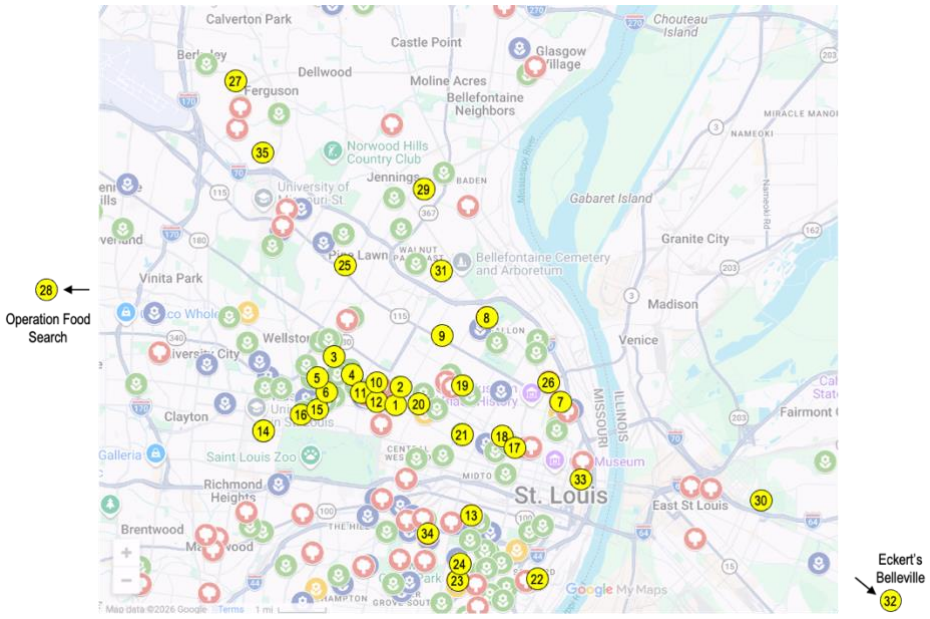
- Slow processes for starting everything. Too many requirements for pilots etc
- Lack of knowledge about the opportunities and benefits and where skills can be used.
- Other issues become greater priorities and public funding potentially for urban ag gets reallocated (by local government)
- Old laws and policies that are preventing creative new initiatives. A policy cleanup is needed.
- Governance issues: who will represent a coalition to e.g. GSL and the city? And who at the city do we approach about this? Both are unclear - we lack a formal coalition.
- To influence candidates and use our voting power, we need to raise the issue as part of election processes within the city.
- Overcome bi-state divide… In Illinois most urban ag funding goes to Chicago. Illinois side engagement with the STL foodshed needs to increase and the urban metro needs to be more bi-state.

Key question: How are we defining for expansion of urban ag in STL and what are the metrics for this?

Bottom line: Urban ag and food needs to be more urgent. It needs to be a priority. We need to get people to know and to care.

Attachment 4. Selected STL Urban Ag Locations (key to photos)

ID	Name	Target Time	Included in optional Mini-Tour?
28	Operation Food Search (1644 Lotsie)	12:00:00 PM	Y
27	EarthDance (233 S Dade)	1:00:00 PM	Y
31	City Blossoms (Walnut Park, 6053 Shulte)	1:30:00 PM	Y
1	Fountain Park (780 N Euclid)	2:00:00 PM	*Ran out of time*
12	Ecovillage STL (Kensington & Academy)	2:05:00 PM	*Ran out of time*
34	Green House Venture (De Tonty & Lawrence)	2:15:00 PM	*Ran out of time*
13	SLU Teaching Garden (1325 Compton)	2:20:00 PM	Y
21	Bell Community Garden (3871 Bell)	2:50:00 PM	Y
7	13th Street Community Garden (2714 N 13th)	3:00:00 PM	*Ran out of time*
32	Eckert's Belleville (951 S Green Mt Rd)	3:30:00 PM	Y
30	JJK-FAN Center (101 Jackie Joyner-Kersee Cir)	4:15:00 PM	Y
33	The Post Building (1190 Cole St)	5:00:00 PM	Y
2	Divine Fellowship		
3	Bayer Family YMCA		
4	Cultivating Connections 2		
5	New City Conservation Garden		
6	William L. Clay Community Garden		
8	Clarence Clovers		
9	San Francisco Community Garden		
10	Bustani Ya Upenda		
11	Academy Shermann		
14	Burning Kumquat (Wash U)		
15	Block Unit 1035 Community Garden		
16	McPherson Community Garden		
17	Fresh Starts Community Garden		
18	Historic Miss Tillie's Corner Community Garden		
19	Bridge of Hope Community Garden		
20	Healing and Meditation Garden		
22	Soulard Garden Cooperative		
23	The Orchard on Virginia		
24	Tower Grove East Garden		
25	Wayside Community Garden		
26	Hebert St Community Garden		
29	City Blossoms (Jennings)		



Attachment 5. Optional Pre-Workshop Mini-Tour

12:00 **Operation Food Search**

1644 Lotsie

1:00 **EarthDance Organic Farm School**

233 S Dade

1:30 **City Blossoms Urban Farms**

Walnut Park location

6053 Shulte

2:00 **Tornado-damage (16-May-2025)**

Fountain Park

Ecovillage



2:20 **St. Louis University Teaching Garden**

1325 Compton



2:50 **Bell Community Garden**

3871 Bell



3:30 **Eckert's Belleville**

951 S Green Mt Rd



4:15 **Jackie Joyner-Kersee**

Food & Nutrition (FAN) Center

101 Jackie Joyner-Kersee Cir



5:00 **Reception (The Post Building)**

1190 Cole



Attachment 6. Moderated Pre-Workshop Panel

CLIMATE ANALOGS ACADEMY

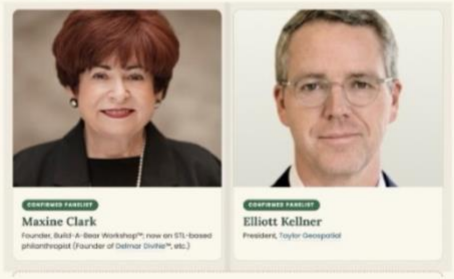
A USDA NIFA Extension Climate Hub Partnership
Led by Washington State University · CSANR

STL Urban Ag Workshop*

Meet us in St. Louis — building a climate-resilient urban food system

DATE	TIME	LOCATION
July 29, 2026 Wednesday	8:00 am – 4:00 pm Full-day workshop	CIC, St. Louis St. Louis, MO

The workshop includes local experts alongside Specialty Crop Extension specialists from across the country – particularly those in regions now experiencing St. Louis's future climate (the 'climate analogs' concept). We hope you enjoyed the optional pre-workshop tour, where we visited sites throughout the St. Louis region (including areas on both sides of the Mississippi River. This evening's reception features a moderated panel including **Maxine Clark** (Delmar DivINe, etc.) and **Elliott Kellner** (President, Taylor Geospatial). Please enter your questions as they come to mind using the QR-code below, and we will share as many as we can with our panelists.



Ask questions using the QR-code

** The Climate Analogs Academy is a USDA NIFA Extension Climate Hub Partnerships Project (20236701339348) led by Washington State University's Center for Sustaining Agriculture and Natural Resources (CSANR).*

Agriculture & Food Systems Institute

CSANR
Center for Sustaining Agriculture and Natural Resources
Washington State University

Saint Louis University

Taylor Geospatial

WashU

Questions Posed by the Moderator (Lauren Littrell)

1. Tell us a little about your personal connection to St. Louis.

2. We know that St. Louis has serious problems as it relates to racial division, disparities when it comes to food access and nutrition. What draws you to the work of Urban Agriculture in the St. Louis area?

3. Based on your personal experiences or what you have seen, read, and heard, how does St. Louis's troubled past inform its present in terms of the food insecurity problem?

4. Why should others in the business community become involved and, specifically, what kind of businesses would be most impactful?

5. What is your business currently doing to make an impact this field?

6. In addition to financial resources, what can business contribute to these efforts?

7. How could expansion of Urban Ag help bring renewal and improve lives in St. Louis?

8. To be more specific, what would success look like, in say, 10 years?

9. How can businesses help urban farms become financially sustainable?

10. What about jobs? What kind of jobs might Urban Ag create?

11. What do you think would make companies more willing to purchase locally grown produce?

12. What commitments should business owners make right now if they are interested in making the vision of expanding Urban Ag a reality in the St. Louis area?